HEREDITARY HEMORRHAGIC TELANGIECTASES.*

By F. F. GUNDRUM, M. D., Sacramento.

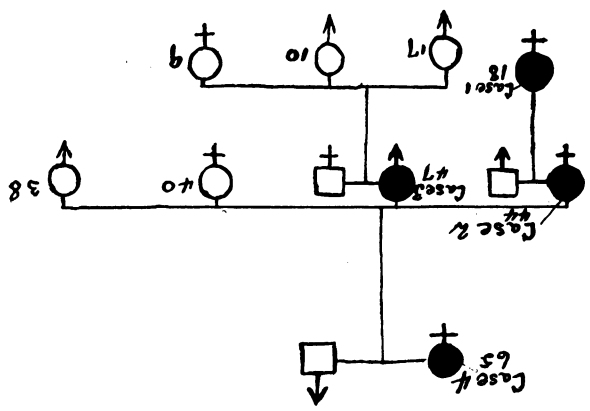
The relative rarity of this remarkable affection so well described by Hames[1] who, in 1909, collected all recorded cases, seems sufficient excuse for a review of its outstanding features and the reporting of an additional family group.

Case 1. Lucy M., October 18, came to me because of chronic, variable pain in right side with tenderness over McBurney's point. Laparotomy by Dr. J. B. Harris disclosed a tuberculous appendix. In the course of the routine examination ten telangiectases, purplish red in color and varying from 0.5 to 3.5 mm. in diameter were noted on the tongue. Upon inquiry she gave a history of quite frequent and severe "nose bleeds." Two small similar telangiectases were found upon the septum nasi.

Case 2. Mother of Case 1, age 44. Well nourished, slightly pale has about forty typical purplish telangiectases on the cheek, ears, eyelids and nose. Five were seen upon the nasal septum. She is subject to severe "nose bleeds."

Case 3. Brother of Case 2, age 47, well developed, healthy; has about twenty "spots" on face and nose, not much trouble with nosebleeds, but must use care in shaving for a slight scratch upon one of these "spots" has caused rapid and prolonged bleeding.

Case 4. Mother of Case 2 and 3; died at 65 from "heart disease," had about thirty similar spots upon the face and was also liable to severe nasal hemorrhage.



I was not able to go any farther back into the history of the family. The California members have been out of touch with the rest of their family connections for many years. There are six other persons in the family, three of them children, who have not as yet shown any signs of this hereditary peculiarity of the blood vessels.

The following diagram gives a schematic résumé. Full dots represent members having telangiectases. Open dots indicate members free from them. Squares denote individuals not included in the hereditary line.

Definition.—A hereditary affection manifesting itself in localized dilatation of capillaries forming distinct spots, apt especially to be found on the face, in the mouth and nose and to give rise to active hemorrhage either spontaneously or as a result of trauma.

Etiology.—Heredity seems by all odds the most frequent and constant factor. Hames thought that traumatism and the abuse of alcohol were to be included as etiological agents. Neither could have had much of a role in these cases.

Pathology.—A wide dilatation of the vessels of the corium.

Symptoms.—Discrete, reddish and purplish, slightly elevated, sharply outlined spots, blanch on pressure and bleed profusely upon very slight injury.

Diagnosis.—Should present no difficulty; the appearance of these telangiectases is pathognomonic.

Treatment.—Consists of cauterization of all telangiectases with chromic acid bead, heat or other means to destroy the tiny mass of dilatated bloodvessels.

Capitol National Bank Bldg.

* Reported to Sacramento Society for Medical Improvement, October 15, 1918.

1. Hames, F. M., Johns Hopkins Hospital Bulletin, Volume XX, No. 216, March, 1909.

ELECTRICITY APPLIED IN GYNECOLOGY.*

By OLGA McNEILE, M. D., Los Angeles.

Electricity, like any other single therapeutic agent, is not a panacea for the relief of all pelvic pathology, but it has made itself one of the necessary methods of treatment in the practice of gynecology.

The most important factor to be considered is the proper choice of cases which will be benefited by the use of the current. It is my firm belief that the failures reported are due to the fact, firstly, that enthusiasts apply electricity in nearly every case that comes to their attention, with resulting injury to the patient and discouragement for the doctor, and, secondly, to the lack of care used in the choice of the kind and amount of the current used, and in the poor technique from the standpoint of asepsis.

The galvanic current is the one which gives the best results in the majority of cases. The first thing to decide is whether the positive or negative current is indicated, but this is not difficult when we remember two general principles—the positive current acts as a constrictor, while the negative current acts as a dilator. In most pelvic conditions that are brought to our attention, we find either a relaxed condition of the uterus and adnexa, with the accompanying congestion, hemorrhage and discharge, or the less common condition which resembles a muscle spasm. The positive current will tend to constrict the relaxed tissues, while the negative current will relax the tense tissues. In addition to these mechanical factors, we find a direct chemical action based upon the fact that the positive pole acts as a cataphoretic agent, and will cause a deposit upon the tissues of whatever drugs are chosen for that purpose. The sounds are copper-tipped. If immersed in a ten per cent. solution of sulphuric acid for a few seconds and then dipped into metallic mercury, a copper amalgam

* Read before the Los Angeles Obstetrical Society, February 12, 1918.

is formed on the sound, and when the negative current is passed through this sound, a deposit of mercury is made at the point of contact, thus causing a direct sterilization of the diseased mucosa.

The technique has for its foundation absolute asepsis, and this is easily maintained by having as small a field of operation as possible, and in intra-uterine manipulations the cervix is the entire field. The speculum is boiled for at least ten minutes. The tenaculum and the sounds are kept in a twenty per cent. solution of lysol, all but the handles being immersed. The speculum is introduced, and the tenaculum, rinsed in sterile water, grasps the upper lip of the cervix. The sound, rinsed in sterile water, is then introduced directly into the cervical canal and up on into the uterine cavity, neither tenaculum nor sound having come into contact with anything but the surfaces to be treated. In infected cases, the cervix may first be painted with tincture of iodine, although this makes the field of operation very dark. I have found it just as satisfactory to paint the cervix and its canal after the treatment is over, although it has not proven necessary for me to use this extra measure against infection.

With the negative pole in the uterus, from twenty to fifty milliamperes are easily tolerated, while with the positive pole in the uterus, from eighty to one hundred and twenty milliamperes are used. A twelve-inch felt pad, partly covered with lead, is placed over the lower abdomen. It is moistened with warm water, and covered with a towel to prevent wetting the patient's clothing. I prefer to allow the patient to wear her corsets during the treatment, since these tend to hold the abdominal pad snugly in contact with the skin, although one must make sure that there is no point of contact between the metal of the corsets and the lead cover of the pad. The indifferent pole is attached to this pad, and the current, which is allowed to run from five to fifteen minutes, must be turned on very gradually. The amount of current tolerated varies in different patients, and may vary in the same patient from time to time, depending upon the amount of moisture in the skin, and upon general atmospheric conditions. It is always better to keep the patient on the table for about five minutes after these treatments. It is necessary to tell them that there may be a slight discharge of blood for a few hours, coming from the puncture of the cervix by the tenaculum.

I have divided the cases in which I think electricity is indicated into six general classes, and will discuss the indications and technique of each class separately, since there are minor variations to be considered.

1. *Dysmenorrhea* is the condition most commonly treated in nulliparous women. The first step in the treatment of this condition is to determine the exact cause of the pain, since dilatation of the cervix will not materially effect a dysmenorrhea caused by ovarian inflammation, or one due to a lack of the normal balance between the various glands of internal secretion. The negative intra-uterine current is only indicated in that form of painful menstruation which is found associated with a true cervical stenosis, acute anteflexion or an infantile uterus. This form of dysemenorrhea is characterized by intense cramping pains preceding the establishment of the flow, may continue from a few hours to a few days, and is relieved as soon as the flow becomes free. In other words, the pain is the result of an attempt of the uterus to slightly dilate the cervix, which is necessary in order to establish free drainage. This dilatation may cause pain as severe as that of the first stage labor pains, and renders many young women unable to follow any regular occupation. In these cases, I dilate twice a week for one month, beginning with the smallest sound. After two treatments the next larger sound passes the internal os very easily. After eight or ten semi-weekly treatments, one dilatation is given just preceding each period for about eight or ten months. Relief from pain is experienced after the third or fourth treatment, and dilatation is continued solely to overdilate the cervical canal, in order that it remains normal in width after the inevitable contraction occurs. The advantage of electrical dilatation over forced dilatation under anesthesia is that in the former the muscle fibres are stretched, while in the latter they are broken, so that in the former practically no scar tissue, with its marked contraction is formed. Therefore, gradual dilatation means a permanently enlarged cervical canal, while forceful dilatation often means a canal smaller than at the time of the operation. The folowing is a typical case illustrating the above class of cases:

Miss S.—38 years old. Since beginning of her menses, has had "cramps" for six or eight hours preceding the flow. Examinations disclosed an acutely anteflexed uterus, with a long cervix and a very narrow canal. The cervix was dilated once a week for seven weeks, with complete relief of the dysmenorrhea, which relief has persisted for four years after the original treatments.

In embryonic, or infantile, uteri, this line of treatment enlarges the uterus in a decided manner, provided there are no marked abnormalities in the ovaries. This enlargement is due to the congestion which the current produces; in other words, increased nourishment causes a stimulation of the production of new tissue. Although it does not develop the uterus in every case, it is the only agent I have found that will give any results. All these cases are put on extract of corpus luteum during the entire period of treatment.

Miss M.—25 years old. Never married. Menstruated for one or two days regularly until four years before treatment was instituted. In those four years, there was not even a show of blood, and the patient suffered all the reflex symptoms common to the menopause. Examination revealed a uterus about half the normal size, acutely anteflexed, and with a cervix no larger than the first joint of the little finger. This case was dilated weekly for a period of three months, then monthly for one year. After two months' treatment, a two-day period was established which continued regularly ever since. The uterus is now normal in size. This girl received both ovarian extract, and one-grain doses of potassium permanganate

by mouth during the entire period of treatment.

2. *In multipara,* the commonest complaint is bearing down, backache and nervousness, nearly always found in cases of subinvolution, with or without retroversion, following child birth or abortion. If the perineum and cervix are badly lacerated, as they too often are, a plastic operation alone can effect a permanent cure, although the results of such an operation are better if the uterus is first reduced in size to nearly normal. In cases where the perineum and cervix are good, or where the patient refuses operation, the positive intrauterine current shows its greatest effect. The size of the uterus becomes normal after from two to eight applications. If retroverted, it can then easily be replaced and held in position with a pessary, which must be worn from one to three months in order to enable the uterus and adnexa to entirely recover their tone. The general treatment in cases of subinvolution consists of rest, knee-chest position, ergot and laxatives, while locally, magnesium sulphate or glycerine are applied by tampon for their dehydrating effects.

Mrs. S.—25 years old. Three children, youngest eighteen months old. Menstrual flow very heavy for past six months, combined with backache, pain in left inguinal region, and leucorrhoea. Uterus was found double the normal size and retroflexed, but movable. Four treatments were given, running the positive current into the uterus for ten minutes each time. At the end of this time, the uterus was normal in size, and the next period was normal in amount. The uterus was then replaced, and a pessary fitted. The pain on left side was relieved, and was due to dragging on adnexa. Wore pessary four weeks only.

3. *Hemorrhage* is a common symptom in women who come to the office for treatment, either as a result of chronic endometritis, or following abortions or even child-birth. The old idea was that all such women needed an immediate curretage, but the positive intrauterine sound acts in these cases much the same as in subinvolution cases. The current causes a contraction of the uterine muscle fibres, clots and shreds of membrane are expressed and the hemorrhage soon ceases. Pure tincture of Iodine is applied to the uterine mucosa, and two or three treatments, a few days apart, are sufficient to restore the uterus to normal.

Mrs. V.—25 years old. Has three children, the youngest of whom is nineteen months old. Ever since last labor, she has had continuous cramps and a slight flow. Uterus was found soft, tender and twice its normal size. After two treatments, all pain and bleeding stopped.

The hemorrhage we find in certain cases of fibromata of the uterus are often controlled by prolonged application of from 100 to 120 milliamperes of the positive current. This makes an ideal preparation for future hysterectomy, lessening the high mortality of that operation by giving the patient a fairer chance, since prolonged hemorrhage lessens resistance to shock more than any one single factor. I have also had good results in cases refusing operation, and after six months' persistent treatment have reduced the size of the tumor to such an extent as to relieve the patient entirely from pressure symptoms. Whether or not it is justifiable to advise the treatment of many cases of fibroids of the uterus, I have not as yet decided. Some cases have shown almost wonderful results, while all cases have responded in some degree to the treatment. The length of time required to reduce such tumors is the great difficulty, since few women have the necessary patience to persist in the treatment long enough to obtain any appreciable results. After all, every abdominal operation has its definite mortality, and would it not be safer to attempt the reduction of such benign growths, provided always that there is no other definite indication for immediate operation? All cases hemorrhaging from fibroids are given ergot and mammary extract, as well as the necessary iron preparations.

Mrs. P.—48 years old. Had hemorrhages from large intra-mural fibroid for the past five years, growing worse from month to month. Had just had a radical operation for carcinoma of the breast, and was in no condition for hysterectomy. This patient received two and three treatments a week for a period covering six months. All bleeding, except a normal flow, stopped after two months, and at the end of six months, the tumor was found to have shrunken to about one-third of its former size. The menopause was established, and the woman gained sixty pounds in weight. That was five years ago, and, although I examine her every six months, there has been no increase in size.

4. *It is in the inflammatory conditions* of the pelvic organs that the greatest care and skill are needed to decide whether or not intra-uterine manipulations are safe. In a general way, I have found that wherever laparotomy is deemed a fairly safe procedure, electrical treatments do no harm. The day of operating acute pus tubes, or curetting every case of septic endometritis, fortunately is passed, since the consensus of opinion now seems to be that the mortality and morbidity are lower if we wait until a protective zone has been formed. After this, it does no harm to gently manipulate the pelvic organs. If the endometrium alone is involved, I dilate the cervical canal sufficiently to allow an application of pure iodine to the entire uterine mucosa, the preliminary dilatation also providing the necessary drainage. Three or four such applications are usually sufficient to clear up these cases.

Salpingitis has meant the needless sterilization of thousands of women. They come to us with chronic tubal trouble, often of years' standing, and because they have suffered so long, a month or two will make no great difference, and that period of time will be sufficiently long to make one last effort to save the tubes. If we find a couple of pus tubes the size of oranges, with dense adhesions to all the surrounding structures, any palliative treatment would be a crime. But in those cases where we have distinct tubal tenderness with some enlargement, but without fixation, especially if we have a positive history of gonorrhea, it stands to reason that if we can apply some preparation of silver to the tubal mucosa we would get results, and we do get them.

I do a preliminary dilatation in order to insure good drainage, and to permit the easy introduction of a syringe. I use an ordinary one ounce, glass, catheter-tipped syringe. The tip is introduced into the uterine cavity, and from one to four drachms of a 25 per cent. solution of argyrol is slowly injected. The tip of the syringe is held tightly against the external os, to prevent the return flow of the drug during that time. We know that the drug enters the tube, because the patient has pain which begins near the uterus, and travels away from the median line. Radiography is another proof, and in cases thus injected and operated upon immediately afterwards, the injected drug may be seen exuding from the fimbriated end of the tube. The objection to this treatment is that any drug which might reach the peritoneum would tend to cause peritonitis, but when we consider that the peritoneum can well tolerate bichloride solutions, ether, and various preparations liberating formaldehyde, I do not see any logical reason why the peritoneum cannot equally well care for a few drops of iodine or argyrol. If some of the organisms in the tube were virulent, and were carried to the peritoneum, it should be able to care for the infection as well as it does after any salpingectomy, where there are surely many organisms liberated from the cut and bruised tissues removed.

This treatment is only given once in every two weeks, in order to enable the local reaction to subside between treatments.

During the entire period, the patient receives vaccine, the kind given depending upon those organisms found by making smears or cultures. Long, hot douches, in the recumbent position, with the water running at very low pressure, are helpful in breaking up newly-formed adhesions. Any drug may be added to the douche, its real therapeutic effect depending upon the prolonged application of heat. Hot sitz baths are a great help, especially for the relief of pain. The electricity in these cases helps in two ways—it makes intra-uterine and intra-tubal applications of specific drugs possible, and also causes an intense local hyperemia, and, after all, the free circulation of pure blood does more than we can estimate in the care of infections:

Miss D. F.—25 years old. Acute attack of gonorrhea six months ago. In bed for six weeks. Acute tubal infection while in hospital. Advised to have both tubes removed as soon as temperature became normal. Refused operation. I began treatment after acute symptoms had subsided for two months. Vaginal discharge still very profuse, and filled with gonococci. Both tubes enlarged and tender. After twenty treatments, half of which were intrauterine and intra-tubal, all pain has ceased, and the tubes feel normal to the touch. Patient is now able to work and earn her own living, and has hopes that she may have children some day. Whether this girl will ever have a baby, remains to be seen, but at least she has a sporting chance this way, where she had no chance if operated upon.

5. *It is in sterility cases* that we see the best results from electricity, that is, in those cases due to a true stenosis of the cervix, acute anteflexion, subinvolution, infantile uterus and mild tubal infections. Before any treatment is instituted, the husband must be examined, for it has been my experience that nearly fifty per cent. of sterility is due to the husband. We also examine the vaginal secretions, as well as those of the cervix and uterus, from two to six hours after coitus, whenever possible, as an additional aid to diagnosis. The technique for these various causes of sterility have been discussed elsewhere, so I will not repeat them. The general treatment of these cases consists in the proper instruction in sex-hygiene, reduction of superflous weight, the increase of the hemoglobin where necessary, and gymnastics, or swimming. Internally, either mammary, thyroid or ovarian extract, or a combination of these three substances, is given over a long period of time.

Mrs. O.—25 years old. Married five years. Russian, and very anxious to have children. Stenosis of cervix and acute anteflexion. Dilated four times. Conceived two months later, and was delivered of a full term baby, by Cesarian section, one year after first treatment was given.

6. *The last class of cases may* be grouped under the heading of "ovarian insufficiency" or cases of a very early and abnormal menopause. I have found women, of from eighteen to thirty years of age, having menstruated regularly for years, become suddenly more and more irregular, until they go from three months to one year without any flow, in the meanwhile experiencing all the reflex disturbances of the menopause, but usually in a very aggravated form. Of course, the first thing to do in these cases is to rule out all possibility of pregnancy, which is only done by watching the case for about two months, without attempting any treatment. If the condition has not been of long standing, ovarian extract or the extract of corpus luteum may be sufficient to re-establish menstruation, but when the condition has progressed a year, or longer, glandular therapy alone is not sufficient. I add to all general measures a monthly dilatation, a few days before the date of the menstrual period. After six months, I discontinue treatment for a few months, largely as a guide for future work. In most cases, the flow remains regular and normal in amount. If not, a few more treatments are given, most women preferring this method of treatment to a premature loss of all sex functions. I do not attempt to explain the reasons for the results in this class of cases, except that I believe it due to the intense local hyperemia produced, and perhaps by some direct stimulation of the ovaries. However, since it preserves the patient's sex life, enables her to become pregnant, and, often most important, keeps her from getting fat, it has proved a great aid in my work.

Mrs. S.—28 years old. Two children, younger six years old. For past three years has only been flowing once in every two or four months. Flow very scant. Nervousness extreme. One treatment before each period for six months has established a fairly regular flow, for now she only occasionally misses one month.

In conclusion, let me discuss briefly some of

the objections raised against this form of treatment in gynecology:

Some will immediately say that electricity in some form or other has been used by quacks since time immemorial. Quacks operate as much as we regulars do, but no one calls every surgeon a quack.

Others, label as abortionist any physician who has an intra-uterine sound in the office. No physician has ever practised his profession for even a short period of time without having been called an abortionist, either by a vindictive patient upon whom he has refused to do an abortion, or by some kindly brother-practioner, who has his own private reasons (?) for the remark. What people say really makes very little difference. If we can cure even a few by a method of treatment more or less in disfavor, we must be broad-minded enough to rise above such trivial standards.

The treatments, in the majority of cases, are more or less painful, depending to a large extent upon the patient's temperament. The best policy is always to tell them that it will hurt, and let them choose before you begin your course of work.

The danger of infection has been fully discussed. If we use the same care in doing any office work that we do in the hospitals, where the nurses watch us, there is no more danger of infection than there is in the surgery.

The last objection raised is that it requires too much time to give treatments of this kind. But the fees for this class of work are, of course, higher than for the standard local treatment, and besides, in the long run, it pays better to entirely cure one case, than to half-cure a dozen.

In conclusion, let me make this positive statement: that the Galvanic current in gynecology is the best single therapeutic agent which I have ever used, and in conjunction with organotherapy, serum-therapy and general hygienic measures, has saved many women from the pain, the horrors, and the uncertainty of the operating room.

SOME INTERESTING SURGICAL CONDITIONS OF THE KIDNEY AND PROSTATE.*

By WILLIAM E. STEVENS, M. D., San Francisco.

Renal Tuberculosis in Children.

The impression is general, even among urologists, that tuberculosis of the kidneys is uncommon in children because in most statistics the ages vary from fifteen to forty years. In my opinion this idea is an erroneous one and arises because of the neglect to examine the urine for tubercle bacilli and the disregard of our more modern urological diagnostic facilities such as cystoscopy, ureteral catheterization, radiography, pyelography and functional kidney tests. Contrary to the opinion of many, a careful microscopical examination of the urine will disclose the presence of tubercle bacilli in a large majority of patients whose kidneys are infected with this organism and the systoscope can be used in male children as young as sixteen months and the ureters catheterized under three years of age. Females fourteen months of age have been cystoscoped and the ureters catheterized in those of twenty-two months.

We should not be satisfied with a diagnosis of cystitis, which is a symptom rather than a clinical entity, or with that of pyelitis, notwithstanding the fact that the latter is a frequent cause of urinary disturbances in children. The importance of the early detection of renal tuberculosis at the time when it is confined to one kidney and surgically curable in at least eighty per cent. of our cases can not be underestimated.

Although a nephrectomy is not to be lightly undertaken it is nevertheless an operation of necessity in cases of unilateral tubercular involvement. While hygienic and tuberculin treatments are justifiable in cases of advanced bilateral infection, or when operation is absolutely refused, permanent results are seldom obtained with these methods, although many cases in which marked temporary improvement has occurred have been published by a number of observers, one of whom has reported a series of fifty cases clinically cured with tuberculin.

The first case to which I wish to call attention is that of a school girl, nine years of age, who complained of frequent urination and slight pain in the left hip. Her family history was negative. With the exception of the year previous to nine months ago she had always suffered from frequency aggravated by exercise or excitement.

The pain in the hip followed an injury five months before and she had been under treatment for tuberculosis of that joint for the past month.

Examination of the heart, lungs and abdomen was negative.

Catheterized specimens of bladder urine contained a moderate number of pus and blood cells and tubercle bacilli were demonstrated by microscopical examination and guinea pig inoculation. Culture of the urine showed a scant growth of bacillus mucosus capsulatus and a few colonies of pneumococci. Cystoscopy revealed a small ulcer partially surrounding a golf hole right ureteral orifice. It was impossible to introduce a catheter over one half centimeter into this ureter on account of stricture. The left ureter was catheterized to the pelvis. The urine from the left kidney contained a few pus cells and Gram positive diplococci but no tubercle bacilli could be found on microscopical examination or animal inoculation.

The phlorizin and urea functional kidney tests showing normal values on the left side an enlarged irregularly shaped right kidney was removed, under gas oxygen anaesthesia.

The wound had healed by the ninth day and the patient was permitted to leave the hospital on the twelfth day following operation.

As can be seen by the specimen the kidney was almost completely destroyed by the caseating cavernous type of infection which was evidently of long duration.

* Read before the San Francisco County Medical Society, November, 1918.